学术报告

**时间：2015年10月30日（星期五）下午 15:00－16:30**

**Time：** 3:00-4:30 pm, Oct. 30, 2015 (Friday)

**地点：北京大学物理大楼中212教室**

**Venue**： Room 212, Physics Building

**报告人：** **叶堉博士**

**Title**： Exotic physical properties of monolayer transition metal dichalcogenides

**Abstract**：The single atomic crystal layer of transition metal dichalcogenides (TMDCs), with numerous exotic physical properties, has become a worthy successor to graphene. The TMDC undergoes an indirect to direct band gap transition when it is thinned down from bulk to monolayer, due to the strong confinement. The monolayer TMDCs hold large exciton binding energy and rich excitonic transition physics. The inversion symmetry breaking brings nonlinearity to the monolayer TMDCs, making them good piezoelectricity and second-harmonic generation materials. Moreover, monolayer TMDCs are found with nonequivalent valley degree of freedom, due to the inversion symmetry and strong spin-orbital coupling. In this talk, I will focus on our recent effort on probing the unique physical properties of monolayer TMDCs and their potential applicationstowards two-dimensional on-chip optoelectronics.

**About speaker**：Yu Yeobtained his B. S. degree in physics from Yunnan University in 2007 and completed his Ph.D. under the supervision of professor Lun Dai in 2012 from Peking University. He is currently working as a postdoctoral fellow in professor Xiang Zhang’s group at University of California, Berkeley.His research interests are in atomic thin two-dimensional materials, their heterostructures and related application photonic and optoelectronic devices.

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